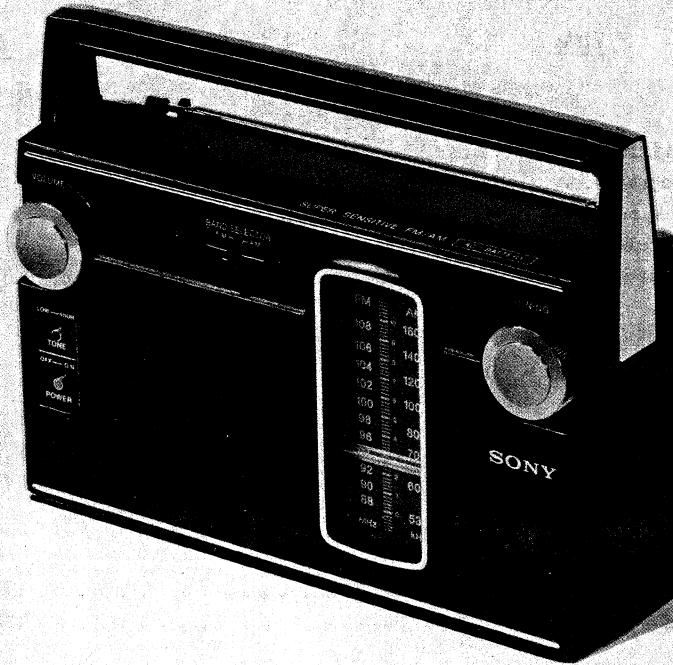


TFM-7150W

USA Model
Canada Model



FM-AM PORTABLE RADIO

SPECIFICATIONS

Circuit:	superheterodyne		Output Power:	1 W maximum	
Frequency Range:	FM	87.5 ~ 108 MHz (3.42 ~ 2.78 m)	Power Consumption:	4 W AC	
	AM	530 ~ 1,605 kHz (566 ~ 187 m)	Current Drain:	FM	23 mA at no signal input
Intermediate Frequency:	FM	10.7 MHz		AM	20 mA at no signal input
	AM	455 kHz	Power Requirement:	120 V AC, 60 Hz 6 V DC (battery size "AA" 4 pcs)	
Antennas:	FM	telescopic (5 section, 75 cm)	Semiconductors:	10 transistors, 8 diodes	
	AM	built-in ferrite bar (10 mm dia x 120 mm)	Speaker:	9.2 cm (3 ³ / ₄ ") dia, 8 Ω	
Sensitivity at 50 mW output:	FM	4.5 μV (13 dB) S/N = 30 dB	Dimensions:	237 (w) x 178 (h) x 70 (d) mm	
	AM	56.3 μV/m (35 dB/m) S/N = 6 dB		9 ² / ₅ (w) x 7 (h) x 2 ⁴ / ₅ (d) inches	
Selectivity:	25 dB at 1,400 kHz ± 10 kHz off-resonance				
Signal-to-Noise Ratio:	FM	65 dB at 54 dB, 98 MHz input	Weight:	1.1 kg, 2 lb (with battery)	
	AM	33 dB at 60 dB/m, 1,000 kHz input			

SONY[®]

SERVICE MANUAL

TABLE OF CONTENTS

<u>Section</u>	<u>Title</u>	<u>Page</u>
1.	OUTLINE	
1-1.	Bandpass Filter	2
1-2.	Block Diagram	3
1-3.	External View	3
1-4.	Internal View — rear —	4
1-5.	Internal View — front —	4
2.	DISASSEMBLY	
2-1.	Disassembly	5
2-2.	Dial Cord Stringing	6
3.	ADJUSTMENTS	7
4.	DIAGRAMS	
4-1.	Schematic Diagram	11
4-2.	Mounting Diagram	13
5.	EXPLODED VIEW & PACKING	
5-1.	Exploded View	15
5-2.	Packing	17
6.	ELECTRICAL PARTS	18
	Hardware Nomenclature	20

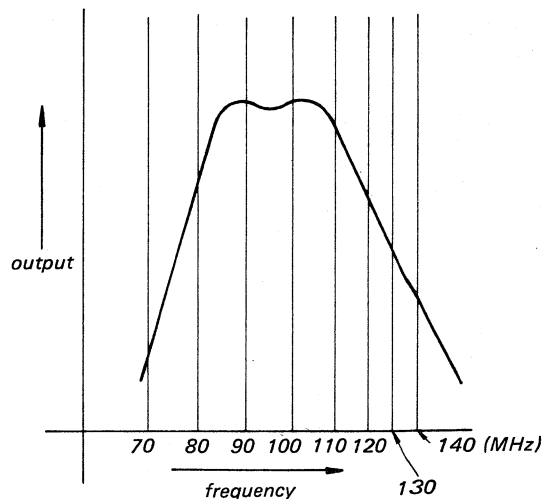
*When ordering replacement parts, use PART NUMBERS listed in Parts Lists or shown in EXPLODED VIEWS.
Parts List reference numbers should not be used.*

SECTION 1

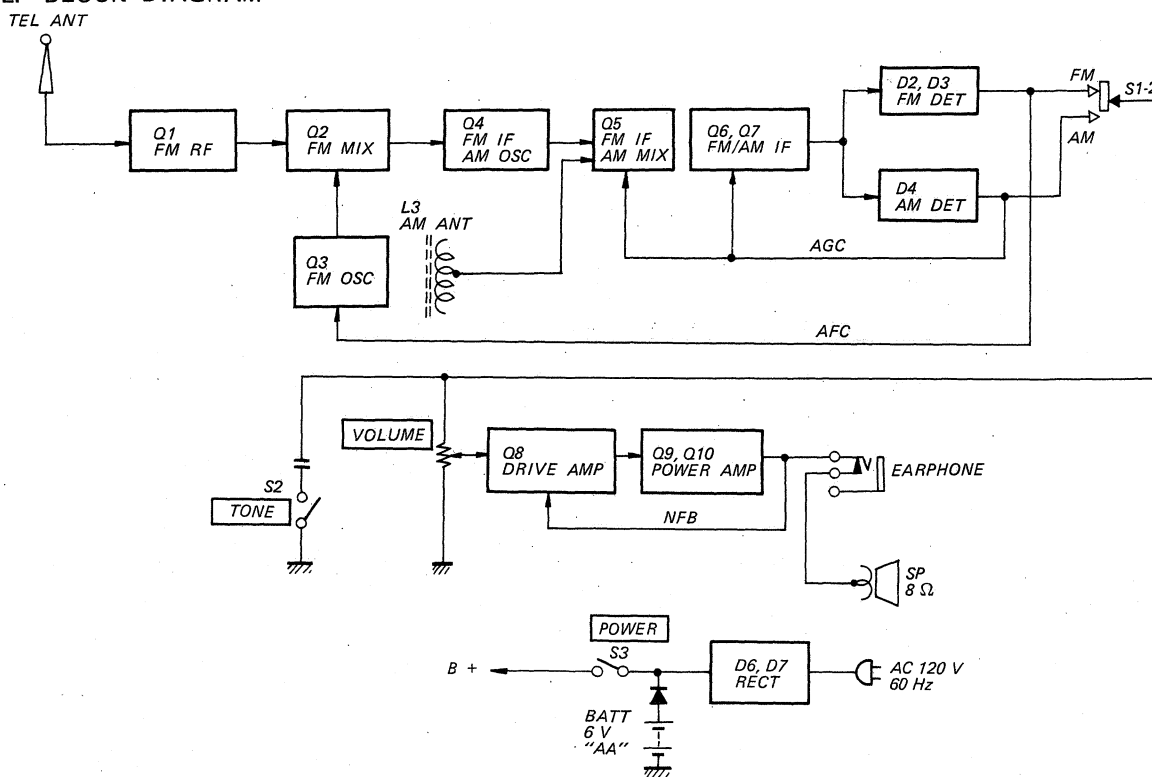
OUTLINE

1-1. BANDPASS FILTER

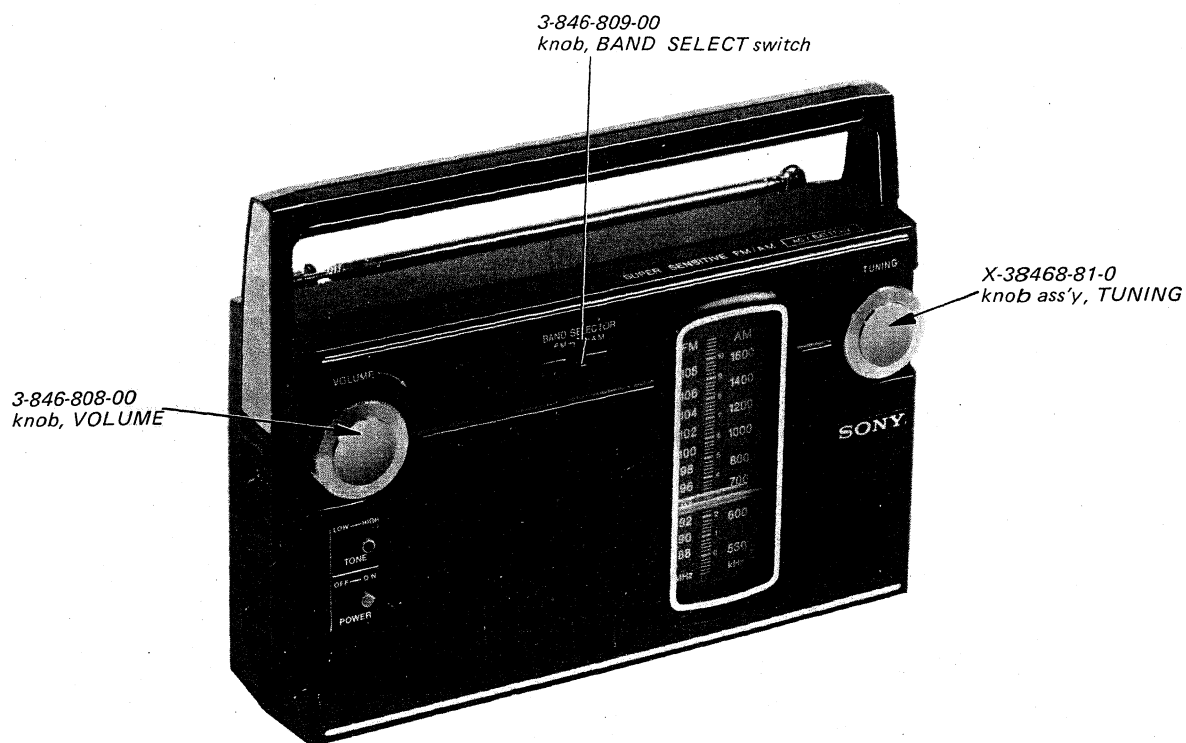
This model uses bandpass filter CL-1 for resonant circuit of FM rf amplifier. This bandpass filter passes frequencies between 87.5 MHz and 108 MHz, and does not pass undesired or image signals.



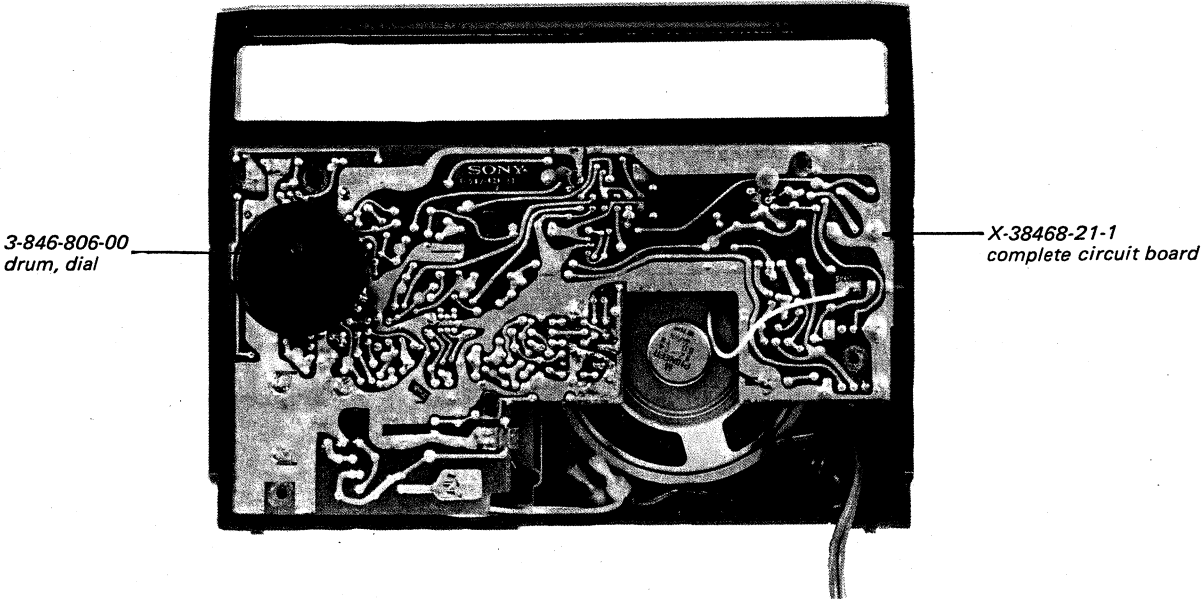
1-2. BLOCK DIAGRAM



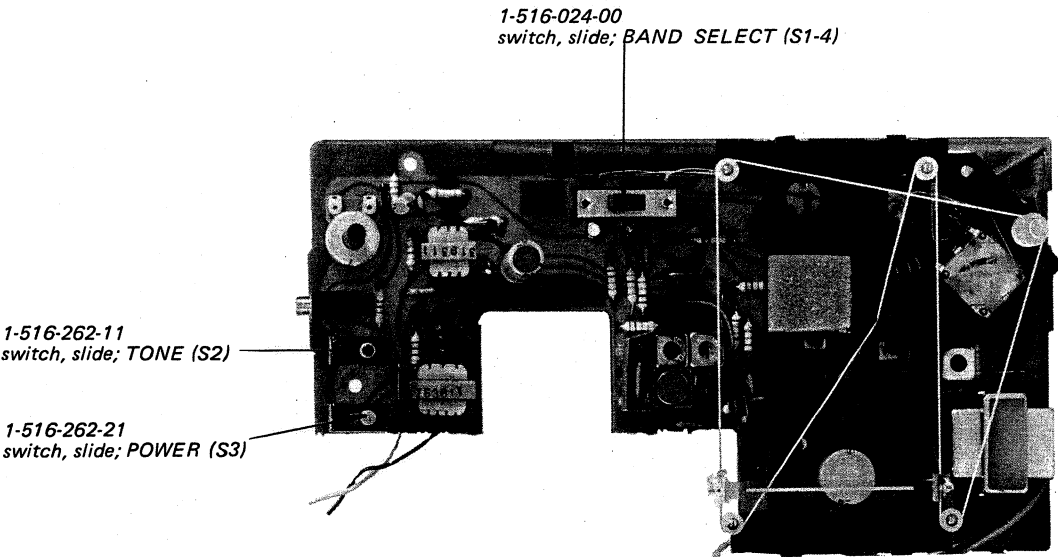
1-3. EXTERNAL VIEW



1.4. INTERNAL VIEW
— rear —

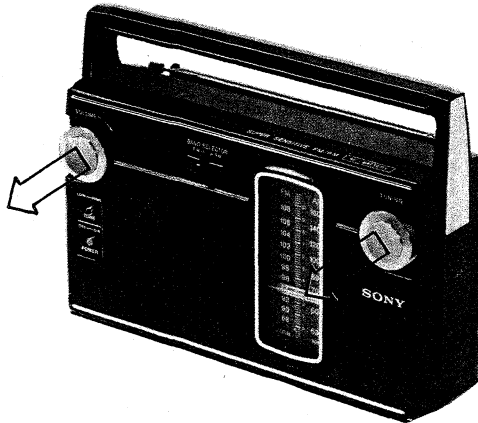


1.5. INTERNAL VIEW
— front —

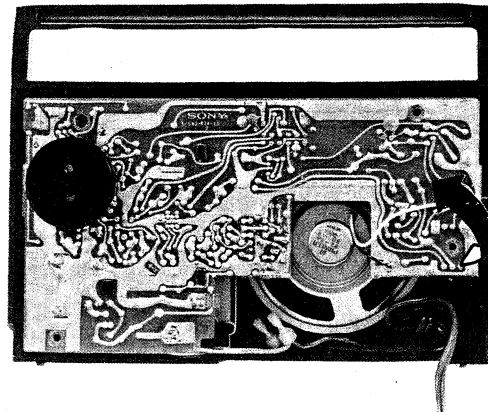


SECTION 2 DISASSEMBLY

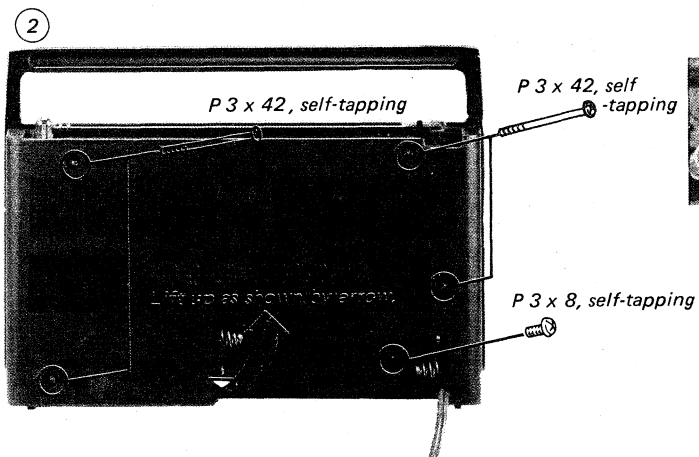
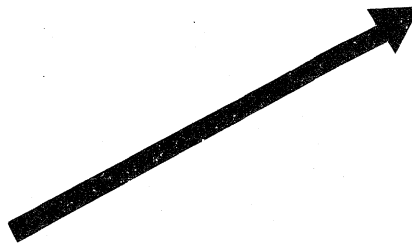
2-1. DISASSEMBLY



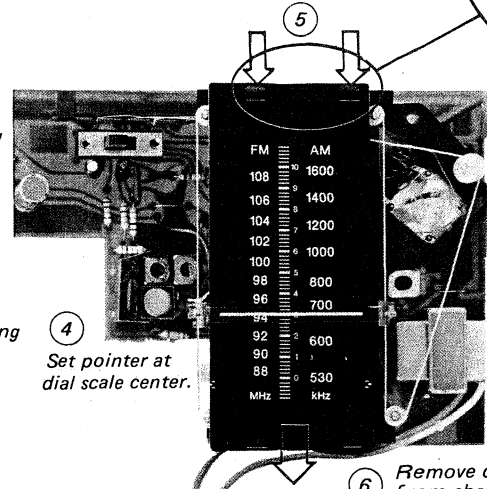
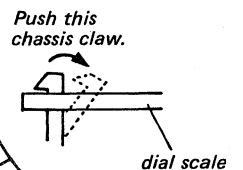
① Remove two knobs.



③ Lift up chassis as shown by arrow



Push chassis claw as shown by arrows.

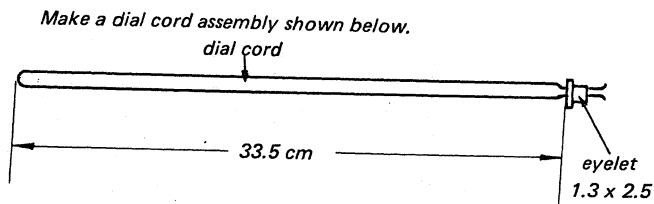


⑥ Remove dial scale from chassis

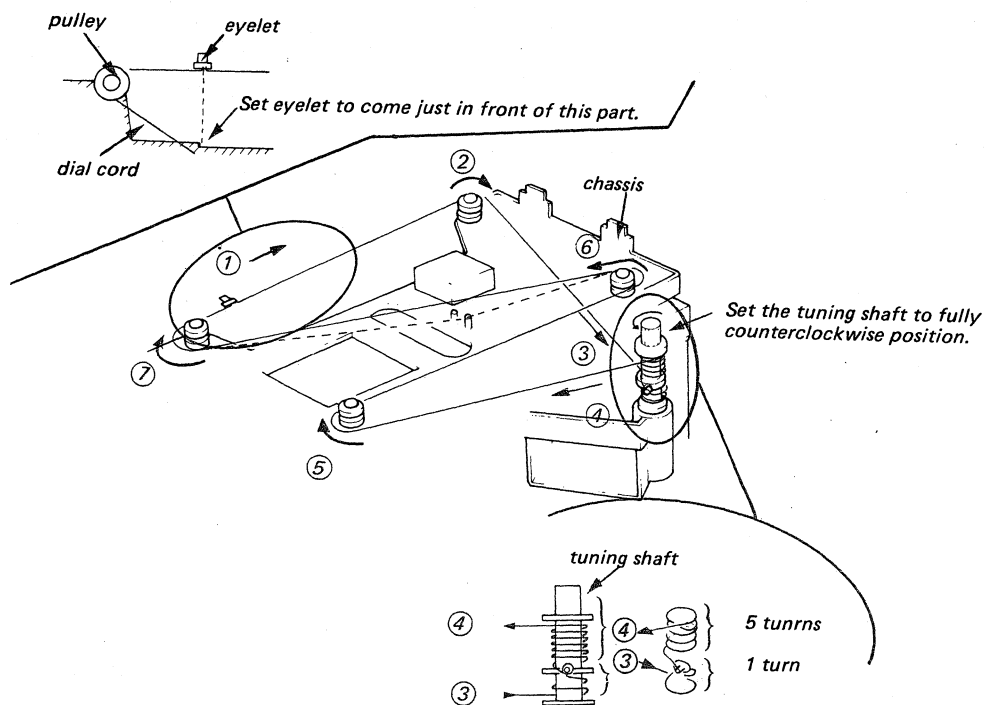
2-2. DIAL CORD STRINGING

Note: Do this dial cord stringing after removing dial scale.

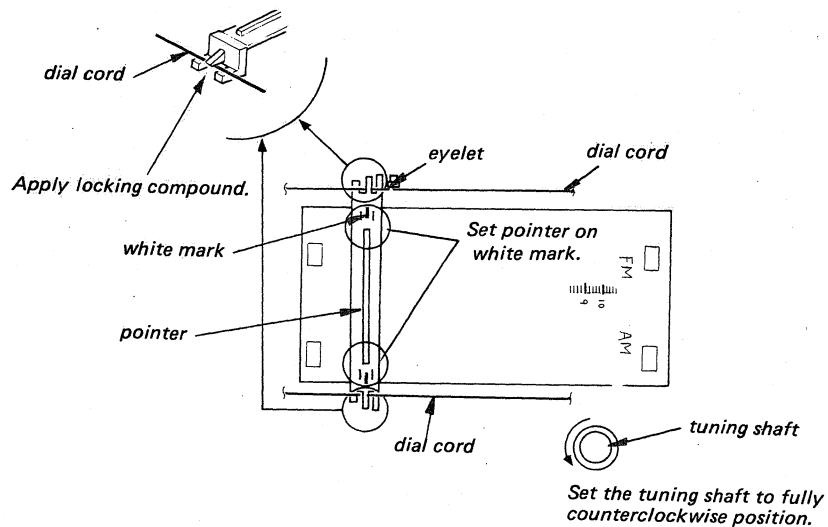
①



②



③



SECTION 3

ADJUSTMENTS

Test Equipment/Tools Required

- * AM rf signal generator
- * FM rf signal generator
- * volt-ohm meter
- * capacitor 0.01 μ F

Note: 1. Moduration

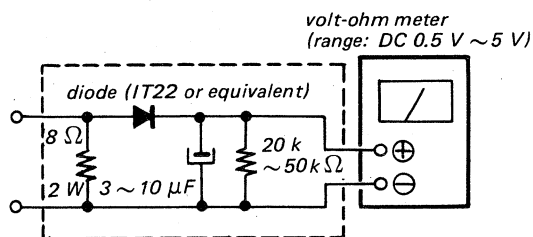
AM: 30% amplitude modulation by 400 Hz signal

FM: ± 22.5 kHz frequency modulation by 400 Hz signal

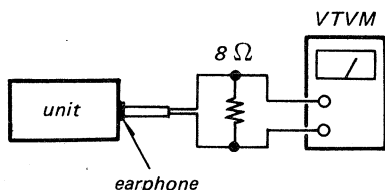
2. AM, FM rf signal generator output level should be as low as possible for following adjustment.

3. When your volt-ohm meter does not have 0.5 ~ 5 V AC range, use the DC range with rectifying network or use VTVM as shown below.

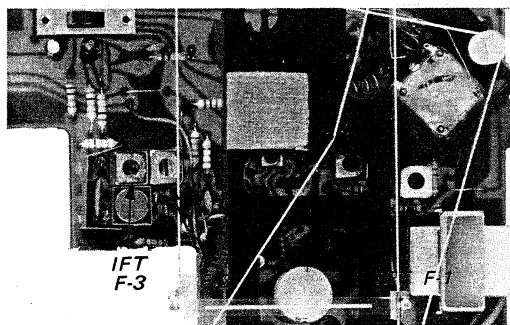
rectifying network



VTVM connection



Adjustment Locations:



1. FM I-f Adjustment

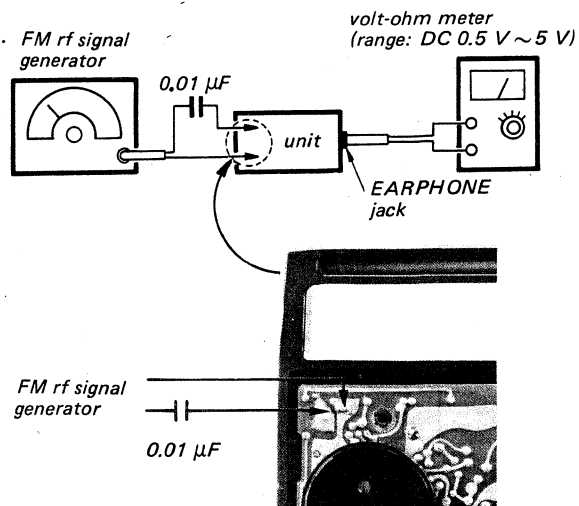
Control/Switch Setting:

BAND SELECT switch: FM

VOLUME control: maximum

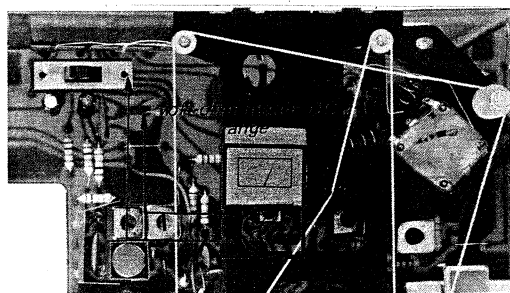
Procedure:

1. FM rf signal generator



Step	FM rf signal generator frequency	Tuning knob position	Adjust	Volt-ohm meter reading
1	10.7 MHz	Detune broadcasting signals.	FM rf signal generator tuning knob	maximum
2	10.7 MHz	Detune broadcasting signals.	IFT F1 ~ F3	maximum
3	Repeat above steps two or three times.			
4	no signal	Detune broadcasting signals.	IFT F3	DC 0 V

Volt-ohm Meter Connection in Step 4:



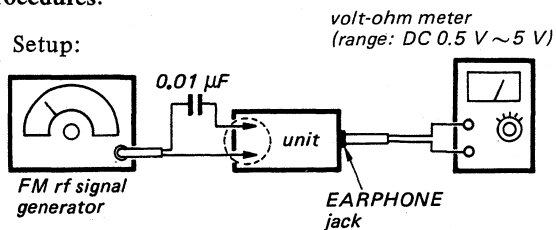
2. FM Frequency Coverage and Tracking Adjustment

Control/Switch Setting:

BAND SELECT switch: FM
VOLUME control: maximum

Procedures:

1. Setup:



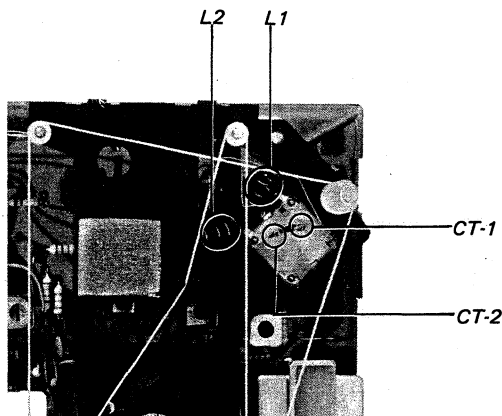
Adjustment	Step	FM rf signal generator frequency	Tuning knob	Adjust	Volt-ohm meter reading
Frequency coverage	1	86.5 MHz	fully counter-clockwise	L2	maximum
	2	109.5 MHz	fully clockwise	CT2	maximum
Tracking	1	86.5 MHz	fully counter-clockwise	L1	maximum
	2	109.5 MHz	fully clockwise	CT1	maximum

Note: 1. Repeat above steps two or three times.

2. After this adjustment, fix the FM osc coil (L2) with wax.

3. Adjust the pitch of coils L1 and L2.

Adjustment Locations:



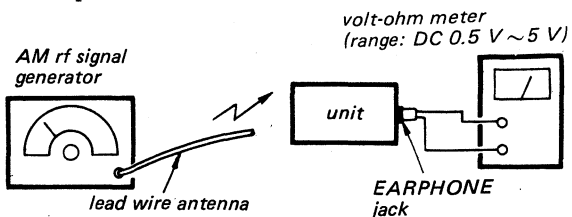
3. AM I-F Adjustment

Control/Switch Setting:

BAND SELECT switch: AM
VOLUME control: maximum

Procedure:

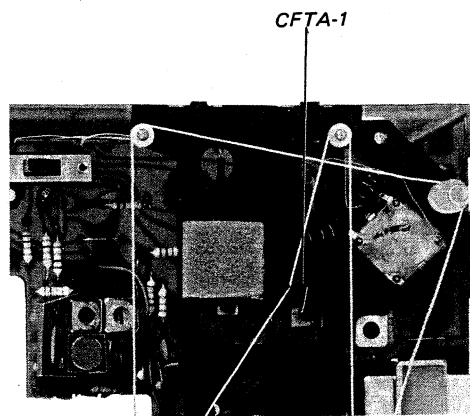
1. Setup:



Step	AM rf signal generator frequency	Tuning knob	Adjust	Volt-ohm meter reading
1	455 kHz	Detune broadcasting signals.	CFTA-1	maximum
2	455 kHz	Detune broadcasting signals.	AM rf signal generator tuning knob	maximum

Note: Repeat above steps two or three times.

Adjustment Location:



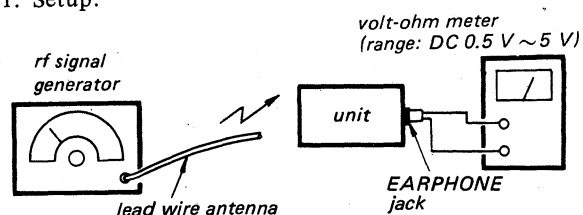
4. AM Frequency Coverage Adjustment and Tracking Adjustment

Control/Switch Setting:

BAND SELECT switch: AM
VOLUME control: maximum

Procedure:

1. Setup:

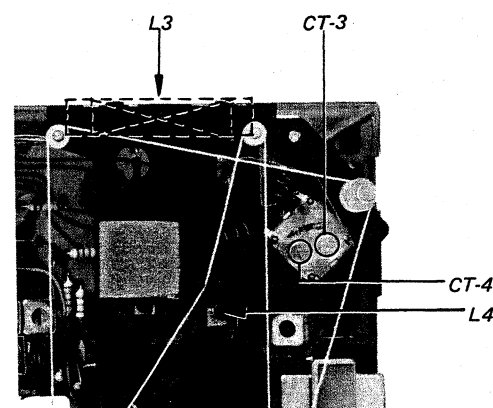


Adjustment	Step	AM rf signal generator frequency	Tuning knob	Adjust	Volt-ohm meter reading
Frequency coverage	1	520 kHz	fully counter-clockwise	L4	maximum
	2	1,680 kHz	fully clockwise	CT4	maximum
Tracking	1	620 kHz	Tune to 620 kHz	L3	maximum
	2	1,400 kHz	Tune to 1,400 kHz	CT3	maximum

Note: 1. Repeat above steps two or three times.

2. After this adjustment, fix the ferrite bar antenna coil (L3) with wax.

Adjustment Locations:

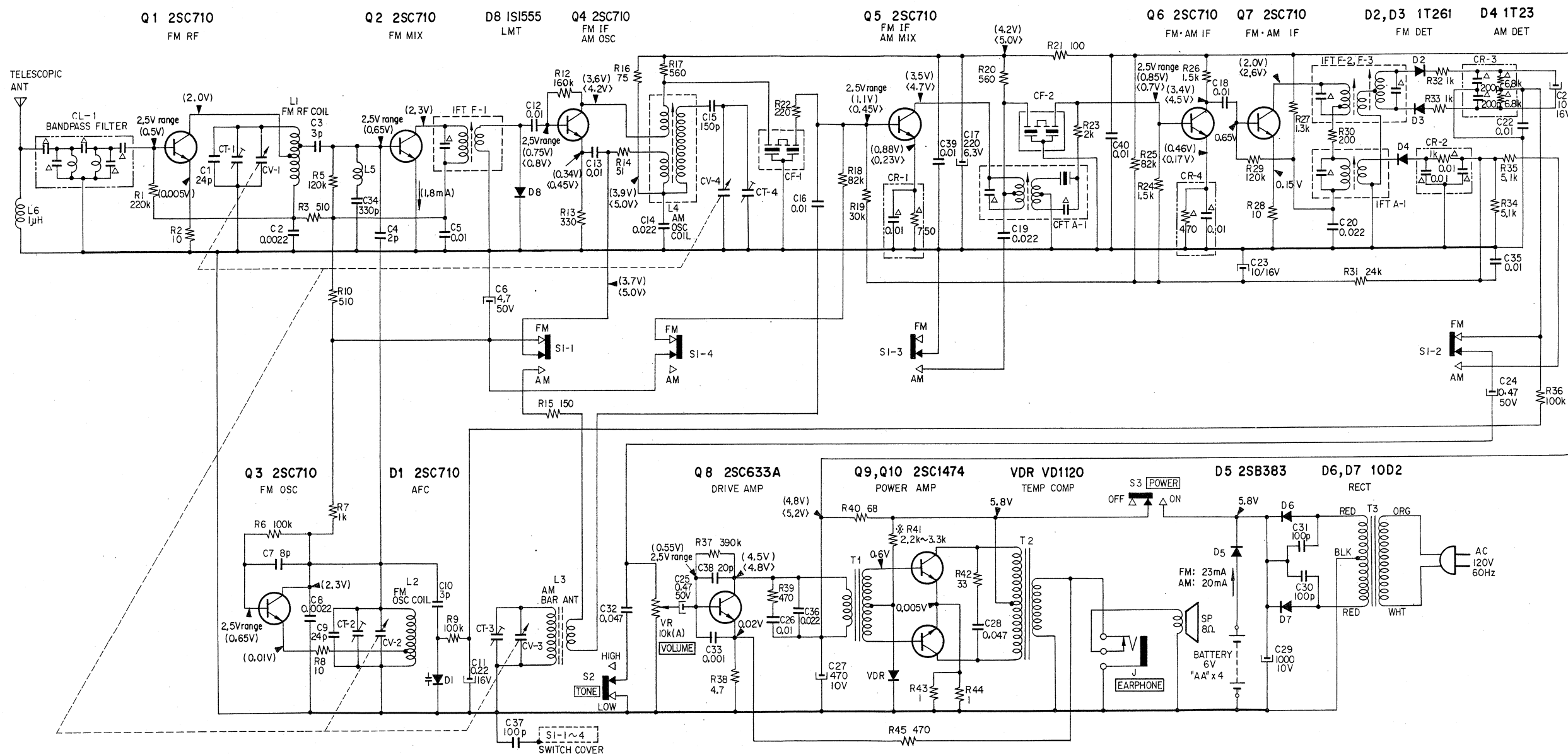


MEMO

SECTION 4

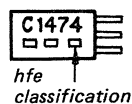
DIAGRAMS

4-1. SCHEMATIC DIAGRAM



- * Resistance value of R41 is given by hfe rank of transistors Q9 and Q10.

hfe rank	R41 (Ω)
3	2.2 k
4	2.7 k
5	3.3 k



Use transistors having the same hfe rank for Q11 and Q12.

- When replacing ceramic filter, use one whose identification color is the same as the used one.
- Switch mode

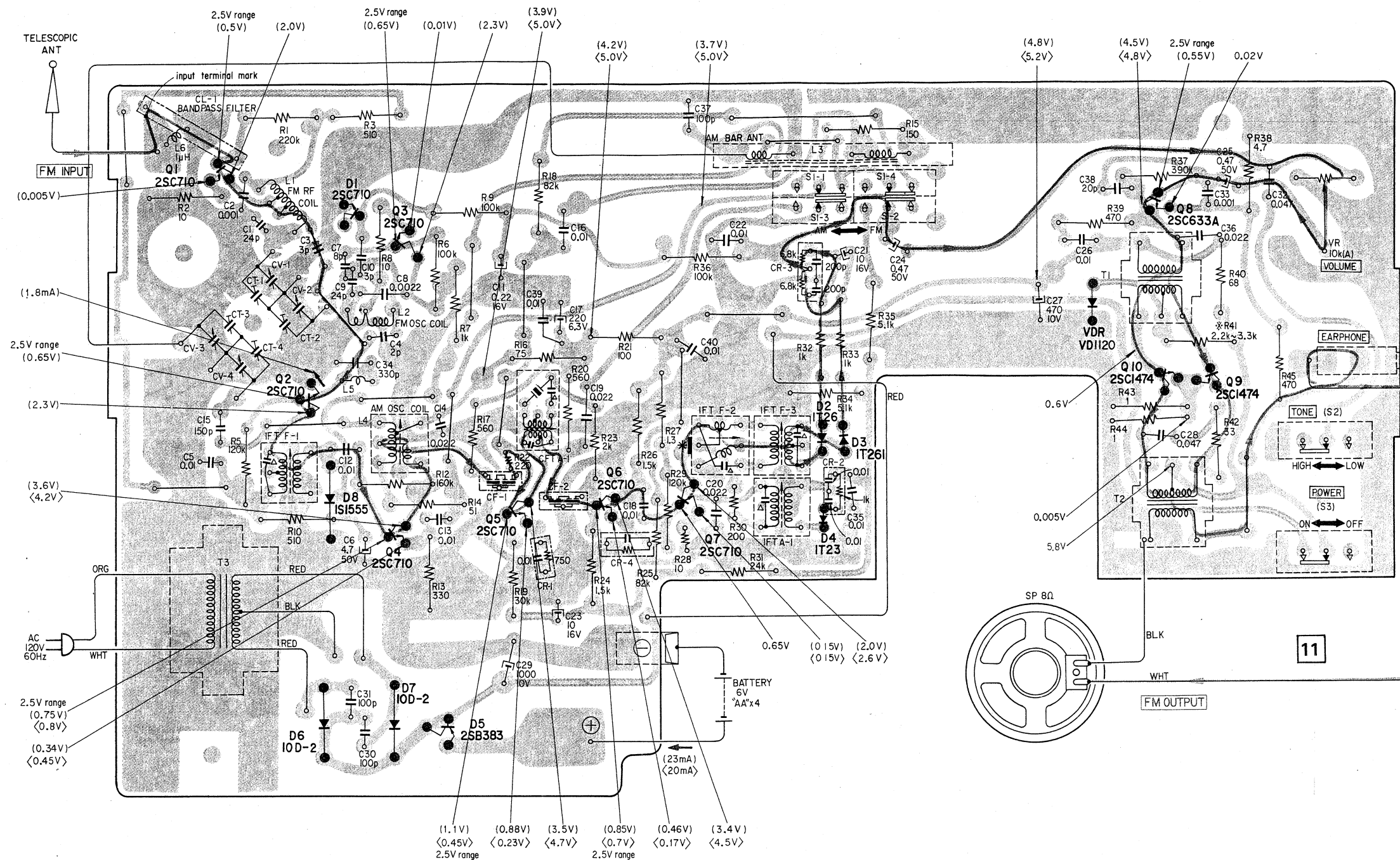
Ref. No.	Switch	Mode
S1	FM/AM	FM
S2	TONE	LOW
S3	POWER	OFF

Note:

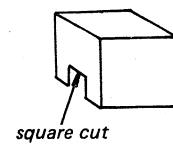
- All resistors and capacitors are in Ω and μF , unless otherwise specified.
- Letter in () suffixed to variable resistor value indicates characteristics.
- Voltage values shown are measured with a voltmeter (20 $k\Omega/V$). Variations may be noted due to normal production tolerances. The values in () indicate readings on FM, in < > on AM, others are common.

- Capacitors marked Δ are included in i-f transformers.
- Transistors are used for D1 and D5 instead of diodes.

4-2. MOUNTING DIAGRAM



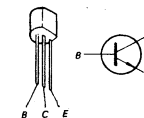
Note: Place IFT F-2 so that square cut comes the same direction as mark * 



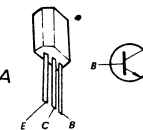
Transistor Location

Q1	2B	Q6	4E
Q2	3C	Q7	4F
Q3	2D	Q8	2I
Q4	4C	Q9	3I
Q5	4D	Q10	3I

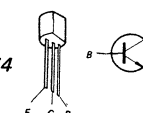
Q1, 2
Q3, 4
Q5, 6 : 2SC710
Q7
D1



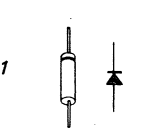
Q8: 2SC633A



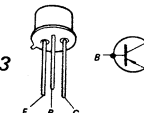
Q9, 10: 2SC1474



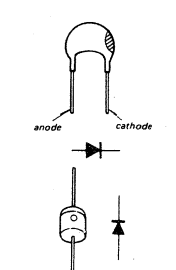
D2, 3: 1T261
D4: 1T23
D8: 1S1555



D5: 2SB383



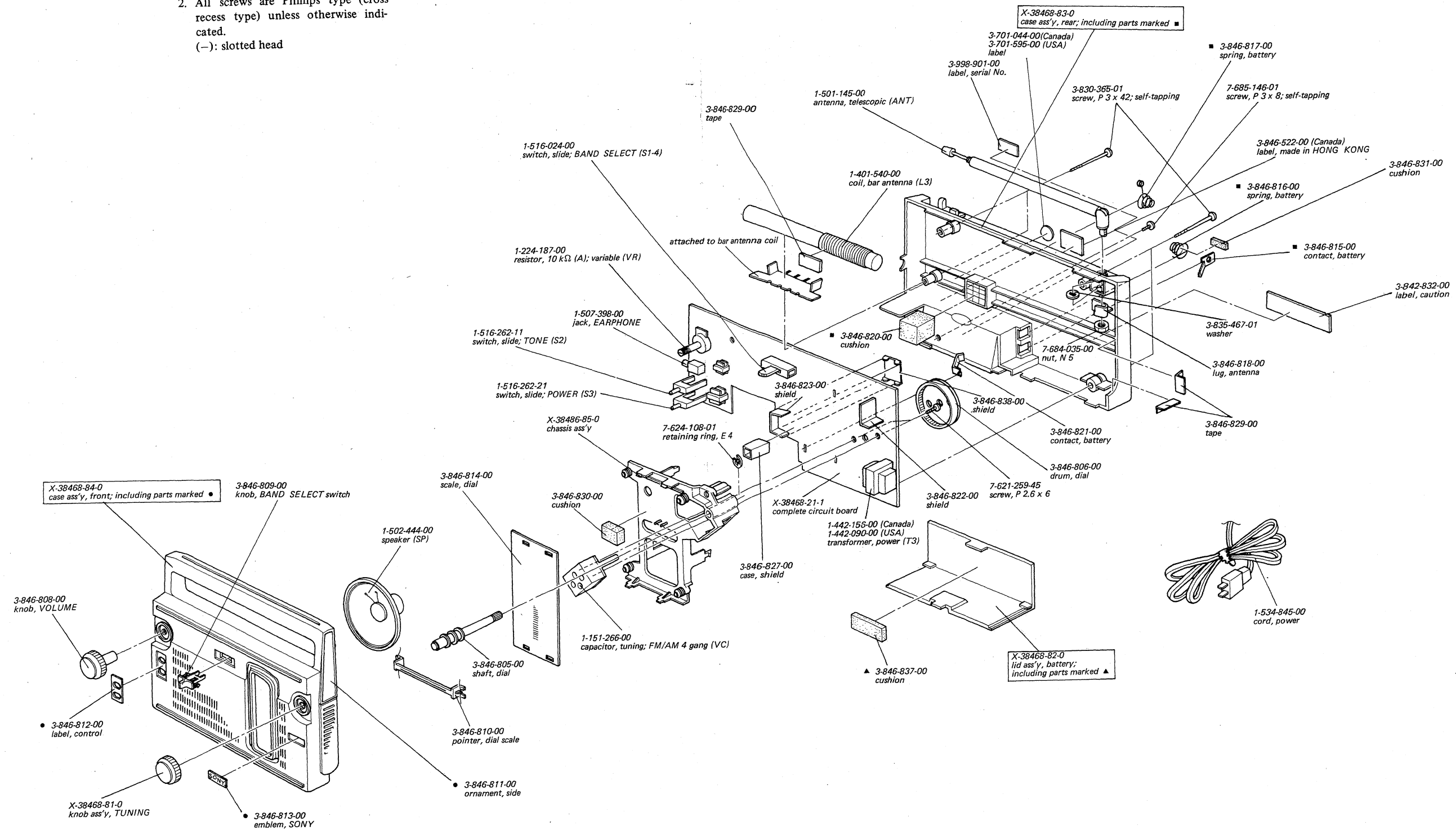
VDR: VD1120



SECTION 5 EXPLODED VIEW AND PACKING

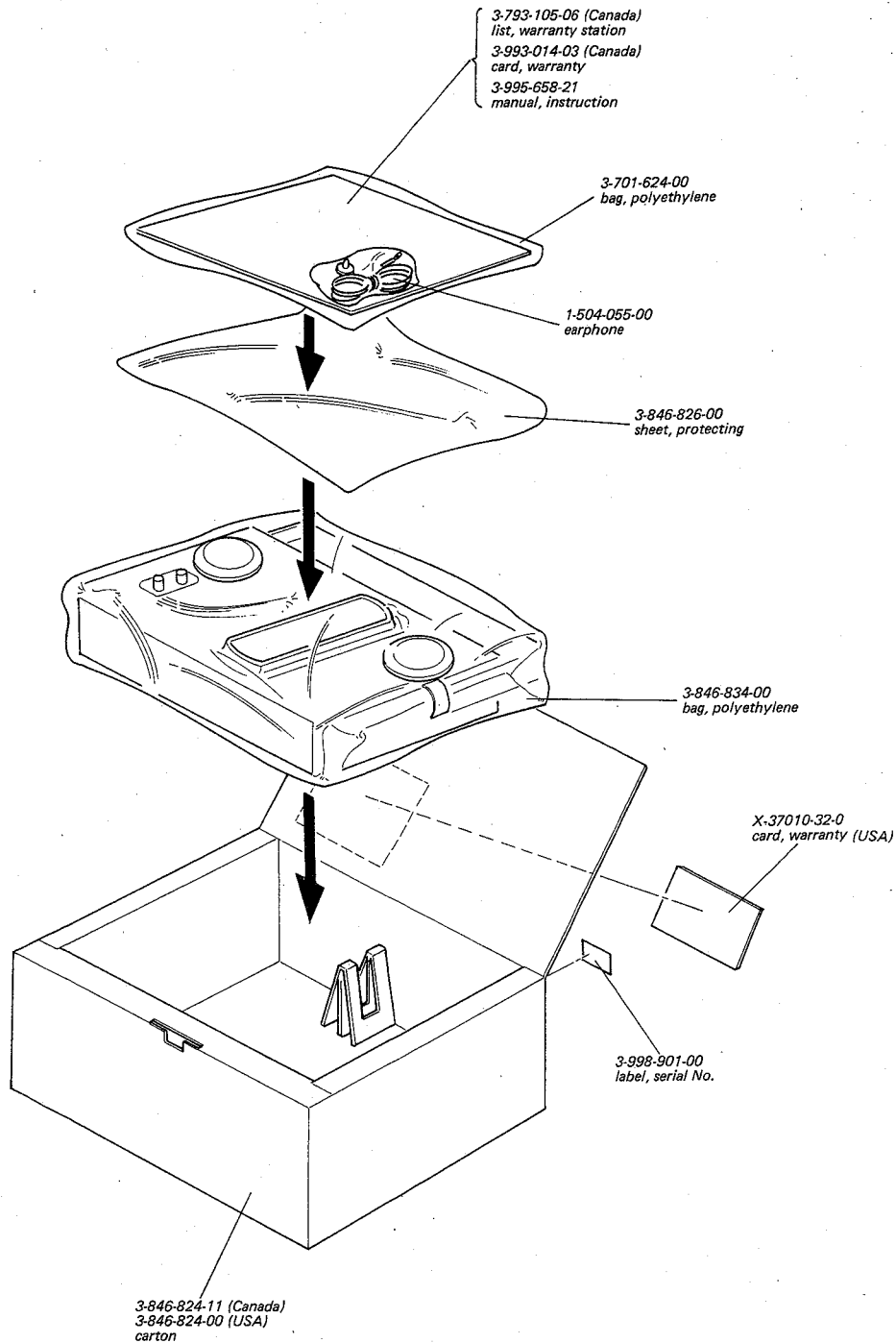
5-1. EXPLODED VIEW

- Note:** 1. Parts without part numbers and names are not available.
2. All screws are Phillips type (cross recess type) unless otherwise indicated.
(-): slotted head



5-2. PACKING

Note: 1. Parts without part numbers and names are not available.



SECTION 6

ELECTRICAL PARTS

Ref. No. Part No. Description

X-38468-21-1 complete circuit board

SEMICONDUCTORS

Q1, 2	transistor	2SC710
Q3, 4	transistor	2SC710
Q5, 6	transistor	2SC710
Q7	transistor	2SC710
Q8	transistor	2SC633
Q9, 10	transistor	2SC1474

D1	transistor	2SC710
D2, 3	diode	1T261
D4	diode	1T23
D5	transistor	2SB383
D6, 7	diode	10D2
D8	diode	1S1555
VDR	varistor	VD1120

COILS & TRANSFORMERS

L1	1-425-791-00	coil, FM rf
L2	1-425-792-00	coil, FM osc
L3	1-401-540-00	coil, bar antenna
L4	1-405-597-00	coil, AM osc
L5	1-401-454-00	coil, FM trap
L6	1-407-178-00	coil, 1 μ H

T1	1-423-193-00	transformer, driver
T2	1-427-356-00	transformer, output
T3	1-442-090-00	transformer, power (USA)
	1-442-156-00	transformer, power (Canada)

IFTA-1	1-403-900-00	AM IFT
IFTF-1	1-403-899-00	FM IFT
IFTF-2	1-403-903-00	FM IFT discriminator
IFTF-3	1-403-902-00	FM IFT discriminator

CAPACITORS

All capacitors are in μ F unless otherwise indicated.

P = μ

C1	1-102-960-11	24 p	50 V	ceramic
C2	1-102-100-11	0.0022	50 V	ceramic
C3	1-102-940-11	3 p	50 V	ceramic
C4	1-102-939-11	2 p	50 V	ceramic
C5	1-101-118-11	0.01	50 V	ceramic
C6	1-121-396-11	4.7	50 V	electrolytic
C7	1-102-945-11	8 p	50 V	ceramic
C8	1-102-100-11	0.0022	50 V	ceramic
C9	1-102-642-11	24 p	50 V	ceramic
C10	1-102-940-11	3 p	50 V	ceramic
C11	1-127-046-00	0.22	50 V	solid aluminum electrolytic

Ref. No. Part No. Description

C12	1-101-118-11	0.01	50 V	ceramic
C13	1-105-833-12	0.01	50 V	mylar
C14	1-105-837-12	0.022	50 V	mylar
C15	1-107-135-11	150 p	50 V	silvered mica
C16	1-101-118-11	0.01	50 V	ceramic
C17	1-121-419-11	220	6.3 V	electrolytic
C18	1-101-118-11	0.01	50 V	ceramic
C19	1-102-005-11	0.022	50 V	ceramic
C20	1-102-005-11	0.022	50 V	ceramic
C21	1-121-651-11	10	16 V	electrolytic
C22	1-101-118-11	0.01	50 V	ceramic
C23	1-121-651-11	10	16 V	electrolytic
C24	1-121-726-11	0.47	50 V	electrolytic
C25	1-121-726-11	0.47	50 V	electrolytic
C26	1-105-833-12	0.01	50 V	mylar
C27	1-121-425-11	470	10 V	electrolytic
C28	1-105-841-12	0.047	50 V	mylar
C29	1-121-736-11	1000	10 V	electrolytic
C30	1-102-960-11	100 p	50 V	ceramic
C31	1-102-960-11	100 p	50 V	ceramic
C32	1-105-841-12	0.047	50 V	mylar
C33	1-101-455-11	0.001	50 V	ceramic
C34	1-102-112-11	330 p	50 V	ceramic
C35	1-105-833-12	0.01	50 V	mylar
C36	1-105-837-12	0.022	50 V	mylar
C37	1-102-973-11	100 p		ceramic
C38		-----		
C39	1-101-923-11	0.01	50 V	ceramic
C40	1-101-923-11	0.01	50 V	ceramic
VC1-4)	1-151-266-00	tuning, FM/AM 4 gang		
CT1-4)				

RESISTORS

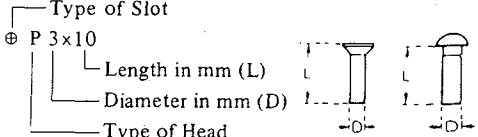
All resistors are in Ω , carbon type and $\frac{1}{4}$ W unless otherwise indicated. k = 1,000

R1	1-244-729-11	220 k
R2	1-244-625-11	10
R3	1-244-666-11	510
R4		-----
R5	1-244-723-11	120 k
R6	1-244-721-11	100 k
R7	1-244-673-11	1 k
R8	1-244-625-11	10
R9	1-244-721-11	100 k
R10	1-244-666-11	510
R11		-----
R12	1-244-726-11	160 k
R13	1-244-661-11	330
R14	1-244-642-11	51
R15	1-244-653-11	150
R16	1-244-646-11	75
R17	1-244-667-11	560

<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>
R18	1-244-719-11	82 k
R19	1-244-708-11	30 k
R20	1-244-667-11	560
R21	1-244-649-11	100
R22	1-240-457-11	220
R23	1-244-680-11	2 k
R24	1-244-677-11	1.5 k
R25	1-244-719-11	82 k
R26	1-244-677-11	1.5 k
R27	1-244-676-11	1.3 k
R28	1-244-625-11	10
R29	1-244-723-11	120 k
R30	1-240-456-11	200
R31	1-240-706-11	24 k
R32	1-244-673-11	1 k
R33	1-244-673-11	1 k
R34	1-244-690-11	5.1 k
R35	1-244-690-11	5.1 k
R36	1-244-721-11	100 k
R37	1-244-735-11	390 k
R38	1-244-617-11	4.7
R39	1-244-665-11	470
R40	1-244-645-11	68
R41	1-244-681-11	2.2 k
	1-244-683-11	2.7 k
	1-244-685-11	3.3 k
} for adjustment		
R42	1-244-637-11	33
R43	1-244-601-11	1
R44	1-244-601-11	1
R45	1-244-665-11	470
VR	1-224-187-00	10 k (A), variable

<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>
MISCELLANEOUS		
ANT	1-501-145-00	antenna, telescopic
CF1, 2	1-527-184-11	filter, ceramic: FM red
	1-527-184-12	filter, ceramic: FM blue
	1-527-184-13	filter, ceramic: FM orange
	1-527-184-14	filter, ceramic: FM black
	1-527-184-15	filter, ceramic: FM white
CF3	1-403-163-11	ceramic filter, 455 kHz
CL1	1-231-249-00	bandpass filter
CR1	1-231-171-00	C-R component
CR2	1-231-204-00	C-R component
CR3	1-231-202-00	C-R component
CR4	1-231-160-00	C-R component
J	1-507-398-00	jack, EARPHONE
S1-4	1-534-845-00	cord, power
	1-516-024-00	switch, slide; BAND SELECT
S2	1-516-262-11	switch, slide; TONE
S3	1-516-262-21	switch, slide; POWER
SP	1-502-444-00	speaker

— Hardware Nomenclature —

P — Pan Head Screw			SC — Set Screw		
PS — Pan Head Screw with Spring Washer			E — Retaining Ring (E Washer)		
K — Flat Countersunk Head Screw			W — Washer		
B — Binding Head Screw			SW — Spring Washer		
RK — Oval Countersunk Head Screw			LW — Lock Washer		
T — Truss Head Screw			N — Nut		
R — Round Head Screw			— Example — 		
F — Flat Fillister Head Screw					

SONY CORPORATION

3C0537-1

© 1973

Printed in Japan

**FM-AM PORTABLE
RADIO**

TFM-7150W

USA Model

(Serial No. 30001 ~ 35000, 45501 ~ 55500)

Canada Model

(Serial No. 45001 ~ 45500)

SUPPLEMENT

No. 1

July, 1973

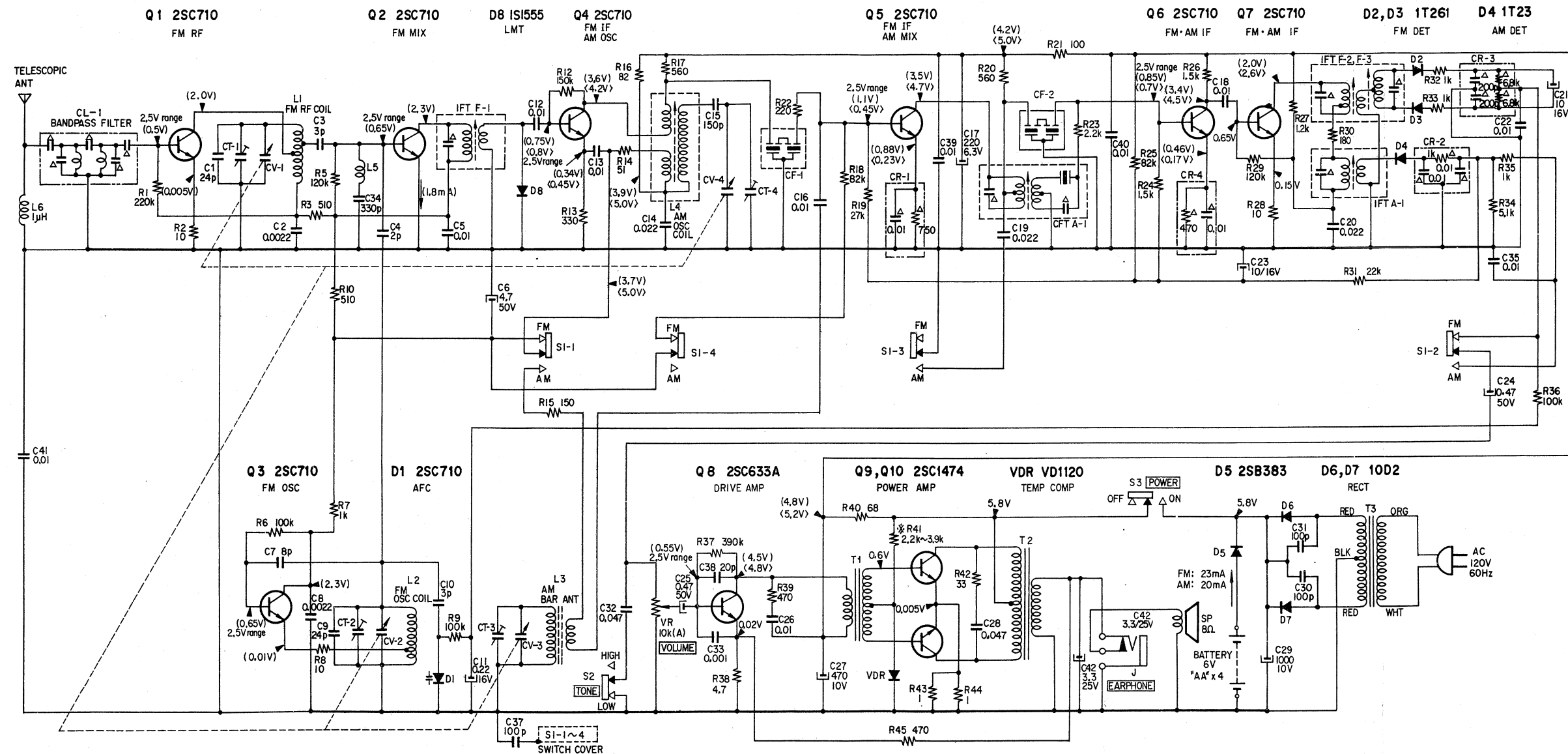
This supplement updates the service manual to include production changes.
File this supplement with the service manual.

SONY®
SERVICE MANUAL

MEMO

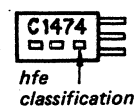
This image shows a single page of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There is no handwriting or other markings on the paper.

1. SCHEMATIC DIAGRAM



Note: * Resistance value of R41 is given by hfe rank of transistors Q9 and Q10.

hfe rank	R41 (Ω)
3	2.2 k
4	3.3 k
5	3.9 k



Use transistors having the same hfe rank for Q11 and Q12.

• When replacing ceramic filter, use one whose identification color is the same as the used one.

• Switch mode

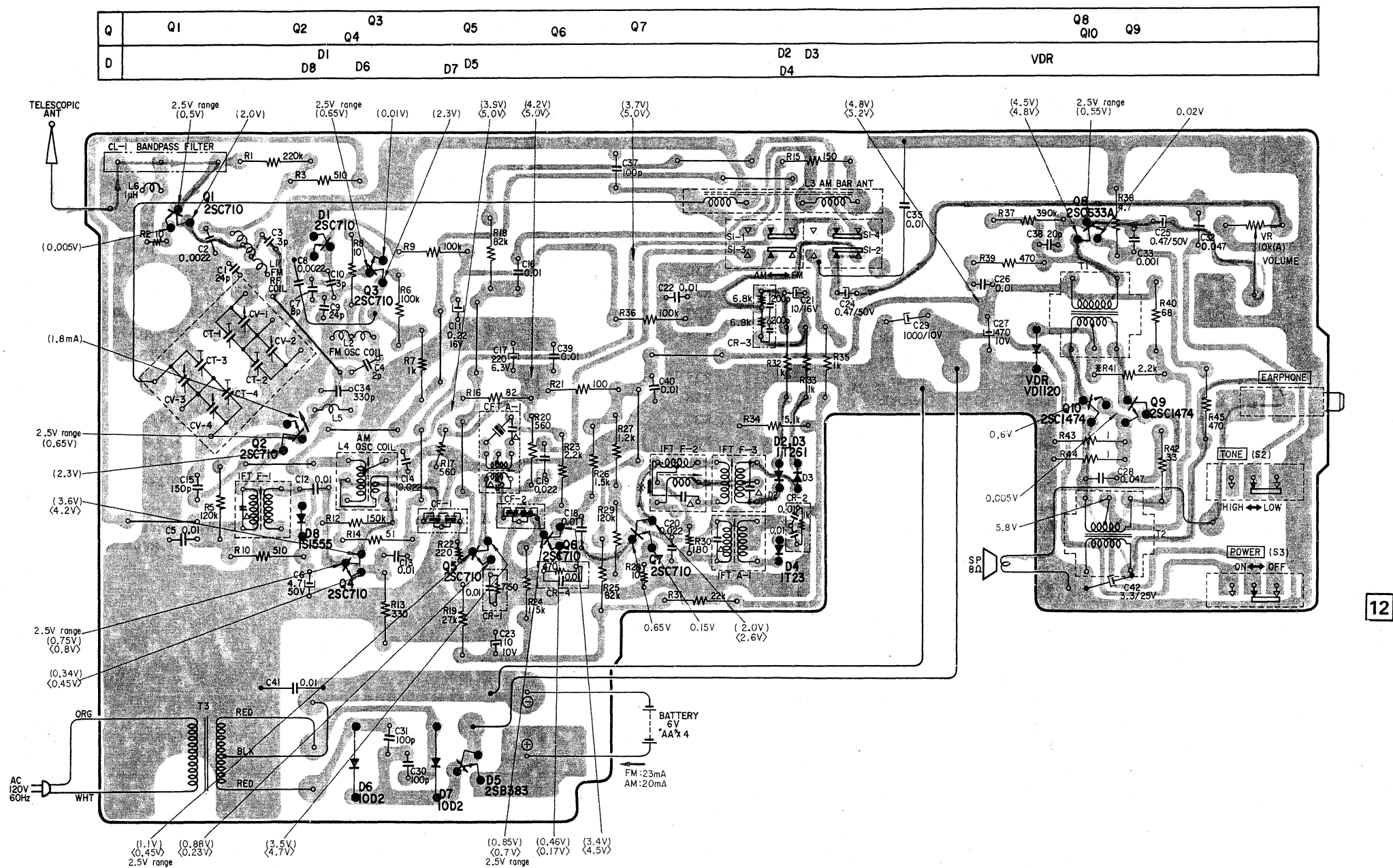
Ref. No.	Switch	Mode
S1	FM/AM	FM
S2	TONE	LOW
S3	POWER	OFF

- All resistors and capacitors are in Ω and μF , unless otherwise specified.
- Letter in () suffixed to variable resistor value indicates characteristics.
- Voltage values shown are measured with a voltmeter (20 $\text{k}\Omega/\text{V}$). Variations may be noted due to normal production tolerances. The values in () indicate readings on FM, in < > on AM, others are common.

- Capacitors marked Δ are included in i-f transformers.
- Transistors are used for D1 and D5 instead of diodes.

2. MOUNTING DIAGRAM

— Conductor Side —

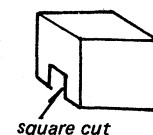


12

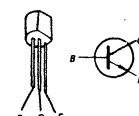
— : signal path in FM mode

Note: 1. C8
C35
C41
C42 } mounted on conductor side

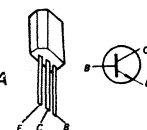
2. Place IFT F-2 so that square cut comes in the same direction as mark *



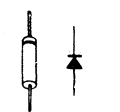
Q1, 2
Q3, 4 : 2SC710
Q5, 6
Q7
D1



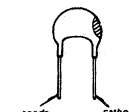
Q8: 2SC633A



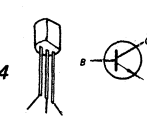
D2, 3: 1T261
D4: 1T23
D8: 1S1555



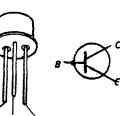
VDR: VD1120



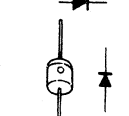
Q9, 10: 2SC1474



D5: 2SB383



D6, 7: 10D2



3. ELECTRICAL PARTS LIST

Ref. No.	Part No.	Description
----------	----------	-------------

	X-38468-21-1	complete circuit board
--	--------------	------------------------

SEMICONDUCTORS

Q1, 2		transistor	2SC710
Q3, 4		transistor	2SC710
Q5, 6		transistor	2SC710
Q7		transistor	2SC710
Q8		transistor	2SC633
Q9, 10		transistor	2SC1474
D1		transistor	2SC710
D2, 3		diode	1T261
D4		diode	1T23
D5		transistor	2SB383
D6, 7		diode	10D2
D8		diode	1S1555
VDR		varistor	VD1120

COILS & TRANSFORMERS

L1	1-425-791-00	coil, FM rf
L2	1-425-792-00	coil, FM osc
L3	1-401-540-00	coil, bar antenna
L4	1-405-597-00	coil, AM osc
L5	1-401-454-00	coil, FM trap
L6	1-407-178-00	coil, 1 μ H
T1	1-423-193-00	transformer, driver
T2	1-427-356-00	transformer, output
T3	1-442-090-00	transformer, power (USA)
	1-442-156-00	transformer, power (Canada)
IFTA-1	1-403-900-00	AM IFT
IFTF-1	1-403-899-00	FM IFT
IFTF-2	1-403-903-00	FM IFT discriminator
IFTF-3	1-403-902-00	FM IFT discriminator

CAPACITORS

All capacitors are in μ F unless otherwise indicated.P = μ μ

C1	1-102-960-11	24 p	50 V	ceramic
C2	1-102-100-11	0.0022	50 V	ceramic
C3	1-102-940-11	3 p	50 V	ceramic
C4	1-102-939-11	2 p	50 V	ceramic
C5	1-101-118-11	0.01	50 V	ceramic
C6	1-121-396-11	4.7	50 V	electrolytic
C7	1-102-945-11	8 p	50 V	ceramic
C8	1-102-100-11	0.0022	50 V	ceramic
C9	1-102-642-11	24 p	50 V	ceramic
C10	1-102-940-11	3 p	50 V	ceramic
C11	1-127-046-00	0.22	50 V	solid aluminum

Ref. No.	Part No.	Description
----------	----------	-------------

C12	1-101-118-11	0.01	50 V	ceramic
C13	1-105-833-12	0.01	50 V	mylar
C14	1-105-837-12	0.022	50 V	mylar
C15	1-107-135-11	150 p	50 V	silvered mica
C16	1-101-118-11	0.01	50 V	ceramic
C17	1-121-419-11	220	6.3 V	electrolytic
C18	1-101-118-11	0.01	50 V	ceramic
C19	1-102-005-11	0.022	50 V	ceramic
C20	1-102-005-11	0.022	50 V	ceramic
C21	1-121-651-11	10	16 V	electrolytic
C22	1-101-118-11	0.01	50 V	ceramic
C23	1-121-651-11	10	16 V	electrolytic
C24	1-121-726-11	0.47	50 V	electrolytic
C25	1-121-726-11	0.47	50 V	electrolytic
C26	1-105-833-12	0.01	50 V	mylar
C27	1-121-425-11	470	10 V	electrolytic
C28	1-105-841-12	0.047	50 V	mylar
C29	1-121-736-11	1000	10 V	electrolytic
C30	1-102-960-11	100 p	50 V	ceramic
C31	1-102-960-11	100 p	50 V	ceramic
C32	1-105-841-12	0.047	50 V	mylar
C33	1-101-455-11	0.001	50 V	ceramic
C34	1-102-112-11	330 p	50 V	ceramic
C35	1-105-833-12	0.01	50 V	mylar
C36				
C37	1-102-973-11	100 p		ceramic
C38				
C39	1-101-923-11	0.01	50 V	ceramic
C40	1-101-923-11	0.01	50 V	ceramic
C41	1-101-118-11	0.01	50 V	ceramic
C42	1-121-392-11	3.3	25 V	elect
VC1-4	1-151-266-00	tuning, FM/AM 4 gang		
CT1-4				

RESISTORS

All resistors are in Ω , carbon type and $\frac{1}{4}$ W unless otherwise indicated. k = 1,000

R1	1-244-729-11	220 k
R2	1-244-625-11	10
R3	1-244-666-11	510
R4		
R5	1-244-723-11	120 k
R6	1-244-721-11	100 k
R7	1-244-673-11	1 k
R8	1-244-625-11	10
R9	1-244-721-11	100 k
R10	1-244-666-11	510
R11		
R12	1-244-725-11	150 k
R13	1-244-661-11	330
R14	1-244-642-11	51

<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>
R15	1-244-653-11	150
R16	1-244-647-11	82
R17	1-244-667-11	560
R18	1-244-719-11	82 k
R19	1-244-707-11	27 k
R20	1-244-667-11	560
R21	1-244-649-11	100
R22	1-240-457-11	220
R23	1-244-681-11	2.2 k
R24	1-244-677-11	1.5 k
R25	1-244-719-11	82 k
R26	1-244-677-11	1.5 k
R27	1-244-675-11	1.2 k
R28	1-244-625-11	10
R29	1-244-723-11	120 k
R30	1-244-655-11	180
R31	1-240-705-11	22 k
R32	1-244-673-11	1 k
R33	1-244-673-11	1 k
R34	1-244-690-11	5.1 k
R35	1-244-673-11	1 k
R36	1-244-721-11	100 k
R37	1-244-735-11	390 k
R38	1-244-617-11	4.7
R39	1-244-665-11	470
R40	1-244-645-11	68
R41	1-244-681-11	2.2 k
	1-244-685-11	3.3 k
	1-244-687-11	3.9 k

<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>
R42	1-244-637-11	33
R43	1-244-601-11	1
R44	1-244-601-11	1
R45	1-244-665-11	470
VR	1-224-187-00	10 k (A), variable

MISCELLANEOUS

ANT	1-501-145-00	antenna, telescopic
*CF1, 2	1-527-184-11	filter, ceramic: FM red
	1-527-184-12	filter, ceramic: FM blue
	1-527-184-13	filter, ceramic: FM orange
	1-527-184-14	filter, ceramic: FM black
	1-527-184-15	filter, ceramic: FM white
CF3	1-403-163-11	ceramic filter, 455 kHz
CL1	1-231-249-00	bandpass filter
CR1	1-231-171-00	C-R component
CR2	1-231-204-00	C-R component
CR3	1-231-202-00	C-R component
CR4	1-231-160-00	C-R component
J	1-507-398-00	jack, EARPHONE
	1-534-845-00	cord, power
S1-1~4	1-516-024-00	switch, slide; BAND SELECT
S2	1-516-262-11	switch, slide; TONE
S3	1-516-262-21	switch, slide; POWER
SP	1-502-444-00	speaker

Note: When replacing ceramic filter marked * , use one whose identification color is the same as the used one.

SONY CORPORATION

SONY®

New Price

Complete Spare Parts List

FM-AM PORTABLE RADIO

Model **TFM-7150W**

U. S. A. MODEL

CANADA MODEL

USA: Serial No. 30001 - 35000, 45501 - 55500

Canada: Serial No. 45001 - 45500

IMPORTANT

When ordering parts, be sure to furnish the following information:

1. Part Number
2. Model Number
3. Description as contained in this parts list

Due to our use of an electronic data processing system, your orders are processed by the PART NUMBER specified by you.

Please order carefully-wrong part numbers result in wrong parts.

NOTE: Prices are subject to change without notice.

COMPLETE SPARE PARTS LIST FOR TFM-7150W

USA Model (Serial No. 30001~35000, 45501~55500)
Canada Model (Serial No. 45001~45500)

AUGUST, 1973

Part No.	Description	Unit Price
I. MECHANICAL PARTS		
X-38468-81-0	Knob Ass'y, TUNING	\$ 0.19
X-38468-82-0	Lid Ass'y, battery	0.12
including:		
3-846-837-00	Cushion	0.02
X-38468-83-0	Case Ass'y, rear	0.95
including:		
3-846-815-00	Contact, battery	0.05
3-846-816-00	Spring, battery	0.02
3-846-817-00	Spring, battery	0.03
3-846-820-00	Cushion	0.02
X-38468-84-0	Case Ass'y, front	1.91
including:		
3-846-811-00	Ornament, side	0.03
3-846-812-00	Label, control	0.03
3-846-813-00	Emblem, SONY	0.02
X-38486-85-0	Chassis Ass'y	0.32
3-701-044-00	Label (Canada)	0.04
3-701-595-00	Label (USA)	0.02
3-830-365-01	Screw, (+) P 3 x 42; self-tapping	0.01
3-835-467-01	Washer	0.02
3-842-832-00	Label, caution	0.01
3-846-522-00	Label, made in HONG KONG	0.01
3-846-805-00	Shaft, dial	0.05
3-846-806-00	Drum, dial	0.05
3-846-808-00	Knob, VOLUME	0.11
3-846-809-00	Knob BAND SELECT switch	0.02
3-846-810-00	Pointer, dial scale	0.07
3-846-811-00	Ornament, side	0.03
3-846-812-00	Label, control	0.03
3-846-813-00	Emblem, SONY	0.02
3-846-814-00	Scale, dial	0.11
3-846-815-00	Contact, battery	0.05
3-846-816-00	Spring	0.02
3-846-817-00	Spring, battery	0.03
3-846-818-00	Lug, antenna	0.05
3-846-820-00	Cushion	0.02

<i>Part No.</i>	<i>Description</i>	<i>Unit Price</i>
3-846-821-00	Contact, battery	\$ 0.04
3-846-822-00	Shield	0.02
3-846-823-00	Shield	0.02
3-846-827-00	Case, shield	0.02
3-846-829-00	Tape	0.01
3-846-830-00	Cushion	0.01
3-846-831-00	Cushion	0.01
3-846-837-00	Cushion	0.02
3-846-838-00	Shield	0.02
3-998-901-00	Label, serial No.	0.01

II. HARDWARE

7-621-259-45	Screw, (+) P 2.6 x 6	0.10 / 100
7-685-146-01	Screw, (+) P 3 x 8; self-tapping	0.24 / 100
7-623-605-00	Eyelet, 1.3 x 2.5	0.06 / 100
7-624-108-01	Retaining Ring, E 4	0.48 / 100
7-684-035-00	Nut 5	0.21 / 100

Ref. No.	Part No.	Description	Unit Price
----------	----------	-------------	------------

III. ELECTRICAL PARTS

X-38468-21-1	Complete Circuit Board		\$ 10.65
--------------	------------------------	---------	----------

SEMICONDUCTORS

Q1, 2	Transistor	2SC710		0.13
Q3, 4	Transistor	2SC710		0.13
Q5, 6	Transistor	2SC710		0.13
Q7	Transistor	2SC710		0.13
Q8	Transistor	2SC633A		0.15
Q9, 10	Transistor	2SC1474		0.20
D1	Transistor	2SC710		0.13
D2, 3	Diode	1T261		0.13
D4	Diode	1T23		0.05
D5	Transistor	2SB383		0.20
D6, 7	Diode	10D2		0.12
D8	Diode	1S1555		0.07
VDR	Varistor	VD1120		0.07

COILS AND TRANSFORMERS

L1	1-425-791-00	Coil, FM rf		0.04
L2	1-425-792-00	Coil, FM osc		0.03
L3	1-401-540-00	Coil, AM bar antenna		0.24
L4	1-405-597-00	Coil, AM osc		0.11
L5	1-401-454-00	Coil, FM trap		0.04
L6	1-407-178-00	Coil, 1 uH		0.04
T1	1-423-193-00	Transformer, driver		0.19
T2	1-427-356-00	Transformer, output		0.16
T3	1-442-090-00	Transformer, power (USA)		0.64
	1-442-156-00	Transformer, power (Canada)		0.75
IFT A-1	1-403-900-00	AM IFT		0.12
IFT F-1	1-403-899-00	FM IFT		0.14
IFT F-2	1-403-903-00	FM IFT discriminator		0.14
IFT F-3	1-403-902-00	FM IFT discriminator		0.14

Ref. No.	Part No.	Description	Unit Price
----------	----------	-------------	------------

CAPACITORS

All capacitors are in uF unless otherwise indicated.

p = uu.

C1	1-102-960-11	24 p	50 V	ceramic	\$ 0.02
C2	1-102-100-11	0.0022	50 V	ceramic	0.02
C3	1-102-940-11	3 p	50 V	ceramic	0.02
C4	1-102-939-11	2 p	50 V	ceramic	0.02
C5	1-101-118-11	0.01	50 V	ceramic	0.02
C6	1-121-396-11	4.7	50 V	electrolytic	0.04
C7	1-102-945-11	8 p	50 V	ceramic	0.02
C8	1-102-100-11	0.0022	50 V	ceramic	0.02
C9	1-102-642-11	24 p	50 V	ceramic	0.02
C10	1-102-940-11	3 p	50 V	ceramic	0.02
C11	1-127-046-00	0.22	50 V	solid aluminum electrolytic	0.05
C12	1-101-118-11	0.01	50 V	ceramic	0.02
C13	1-105-833-12	0.01	50 V	mylar	0.02
C14	1-105-837-12	0.022	50 V	mylar	0.02
C15	1-107-135-11	150 p	50 V	silvered mica	0.02
C16	1-101-118-11	0.01	50 V	ceramic	0.02
C17	1-121-419-11	220	6.3 V	electrolytic	0.06
C18	1-101-118-11	0.01	50 V	ceramic	0.02
C19	1-102-005-11	0.022	50 V	ceramic	0.02
C20	1-102-005-11	0.022	50 V	ceramic	0.02
C21	1-121-651-11	10	16 V	electrolytic	0.04
C22	1-101-118-11	0.01	50 V	ceramic	0.02
C23	1-121-651-11	10	16 V	electrolytic	0.04
C24	1-121-726-11	0.47	50 V	electrolytic	0.03
C25	1-121-726-11	0.47	50 V	electrolytic	0.03
C26	1-105-833-12	0.01	50 V	mylar	0.02
C27	1-121-425-11	470	10 V	electrolytic	0.13
C28	1-105-841-12	0.047	50 V	mylar	0.02
C29	1-121-736-11	1000	10 V	electrolytic	0.13
C30	1-102-960-11	100 p	50 V	ceramic	0.02
C31	1-102-960-11	100 p	50 V	ceramic	0.02
C32	1-105-841-12	0.047	50 V	mylar	0.02
C33	1-101-455-11	0.001	50 V	ceramic	0.02
C34	1-102-112-11	330 p	50 V	ceramic	0.02
C35	1-105-833-12	0.01	50 V	mylar	0.02
C36		-----			
C37	1-102-973-11	100 p		ceramic	0.02
C38	1-102-958-11	20 p		ceramic	0.02
C39	1-101-923-11	0.01	50 V	ceramic	0.02
C40	1-101-923-11	0.01	50 V	ceramic	0.02

4/7 (TFM-7150W)
(R7-69)

USA Model (Serial No. 30001~35000, 45501~55500)
Canada Model (Serial No. 45001~45500)

Ref. No.	Part No.	Description	Unit Price
C41	1-101-118-11	0.01 50 V ceramic	\$ 0.02
C42	1-121-392-11	3.3 25 V elect	0.04
VC	1-151-266-00	tuning, FM/AM 4 gang	0.85

RESISTORS

All resistors are in ohms, carbon type and 1/4 W unless otherwise indicated. (k=1,000)

R1	1-244-729-11	220 k	0.02
R2	1-244-625-11	10	0.02
R3	1-244-666-11	510	0.02
R4		-----	
R5	1-244-723-11	120 k	0.02
R6	1-244-721-11	100 k	0.02
R7	1-244-673-31	1 k	0.02
R8	1-244-625-11	10	0.02
R9	1-244-721-11	100 k	0.02
R10	1-244-666-11	510	0.02
R11		-----	
R12	1-244-725-11	150 k	0.02
R13	1-244-661-11	330	0.02
R14	1-244-642-11	51	0.02
R15	1-244-653-11	150	0.02
R16	1-244-647-11	82	0.02
R17	1-244-667-11	560	0.02
R18	1-244-719-11	82 k	0.02
R19	1-244-707-11	27 k	0.02
R20	1-244-667-11	560	0.02
R21	1-244-649-11	100	0.02
R22	1-240-457-11	220	0.02
R23	1-244-681-11	2.2 k	0.02
R24	1-244-677-11	1.5 k	0.02
R25	1-244-719-11	82 k	0.02
R26	1-244-677-11	1.5 k	0.02
R27	1-244-675-11	1.2 k	0.02
R28	1-244-625-11	10	0.02
R29	1-244-723-11	120 k	0.02
R30	1-244-655-11	180	0.02
R31	1-240-705-11	22 k	0.02
R32	1-244-673-11	1 k	0.02
R33	1-244-673-11	1 k	0.02
R34	1-244-690-11	5.1 k	0.02
R35	1-244-673-11	1 k	0.02

5/7 (TFM-7150W)
(R7-69)

USA Model (Serial No. 30001~35000, 45501~55500)
Canada Model (Serial No. 45001~45500)

<i>Ref. No.</i>	<i>Part No.</i>	<i>Description</i>	<i>Unit Price</i>
R36	1-244-721-11	100 k	\$ 0.02
R37	1-244-735-11	390 k	0.02
R38	1-244-617-11	4.7	0.02
R39	1-244-665-11	470	0.02
R40	1-244-645-11	68	0.02
*R41	1-244-681-11	2.2 k	0.02
	1-244-685-11	3.3 k	0.02
	1-244-687-11	3.9 k	0.02
R42	1-244-637-11	33	0.02
R43	1-244-601-11	1	0.02
R44	1-244-601-11	1	0.02
R45	1-244-665-11	470	0.02
VR	1-224-187-00	10 k (A), variable	0.14

MISCELLANEOUS

ANT	1-501-145-00	Antenna, telescopic	0.72
CF-1, 2	1-527-184-11 ~ 15	Ceramic Filter, 10.7 MHz	0.13
CF-3	1-403-163-11	Ceramic Filter, 455 kHz	0.21
CL-1	1-231-249-00	Band Pass Filter	0.15
CR-1	1-231-171-00	C-R Component	0.04
CR-2	1-231-204-00	C-R Component	0.04
CR-3	1-231-202-00	C-R Component	0.05
CR-4	1-231-160-00	C-R Component	0.04
J	1-507-398-00	Jack, EARPHONE	0.06
P	1-534-845-00	Cord, power	0.32
S1-4	1-516-024-00	Switch, slide; BAND SELECT	0.22
S2	1-516-262-11	Switch, slide; TONE	0.18
S3	1-516-262-21	Switch, slide; POWER	0.18
SP	1-502-444-00	Speaker	0.67

Note: *: to be selected.

<i>Part No.</i>	<i>Description</i>	<i>Unit Price</i>
-----------------	--------------------	-------------------

IV. ACCESSORIES & PACKING MATERIALS

X-37010-32-0	Card, warranty (USA)	 \$ 0.06
1-504-055-00	Earphone	 0.16
3-701-624-00	Bag, polyethylene	 0.01
3-793-105-06	List, warranty station (Canada)	 0.04
3-846-824-00	Carton	 0.27
3-846-826-00	Sheet, protecting	 0.05
3-846-829-00	Card Board	 0.01
3-846-834-00	Bag, polyethylene	 0.02
3-993-014-03	Card, warranty (Canada)	 0.06
3-995-658-21	Manual, instruction	 0.05
3-998-901-00	Label, serial No.	 0.01